Nokia Customer Care
RH-19/RH-50 Series Cellular Phones

1 – General Information

RH-19 3100

RH-19 3120

RH-50 3100b

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The Product

This service manual documents features, functioning and repair of two products, which are variants of the same product family. RH-19 is a traditional triple band GSM phone (900, 1800, 1900 MHz), RH-50 uses GSM with 850 MHz in place of 900 MHz. The RH-19 (RH-50) is a triple band handportable mobile telephone for the E-GSM 900 (GSM850), GSM 1800 and GSM 1900 networks, automatically switching between 900 (850), 1800 and 1900MHz bands; automatic handover between 900 (850) & 1800 MHz bands. It is power class 1 (1W) transceiver in all bands except GSM900 (850) where it is a power class 4 transceiver (2W).

The RH19/RH50 products have additional features as defined below:

- GPRS (General Packet Radio Service)
- Full graphic colour display
- Jack style UI with two soft keys
- Internal antenna
- Integrated handsfree
- Internal vibra
- Plug & play HF support

Handportable transceiver

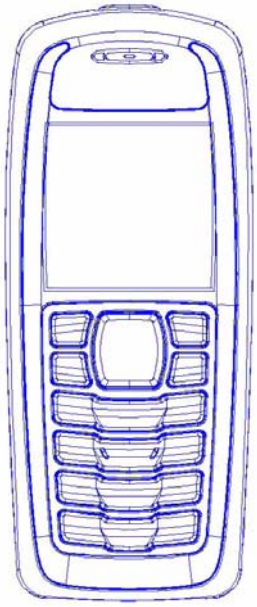

Figure 1: General view of RH-19/RH-50

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Product and module list

Description		RH-19		RH-50
		3100	3120	3100b
3100 Euro-A light blue latin		0511574	-	-
3120 APAC-R Blue Stroke		-	0516003	-
3100b USA-I AWS CTXR blue		-		0512079
Basic Transceiver	1: 2: 3: 4:	0509580 0511478 0511479 0511480	0513172 blue 0514222 green	0511340
MX5 GSM/DCS/PCS system module	1: 2: 3: 4:	0201972 0202204 0202205 0202206	0202205	0202185
SW MCU		0245871		0244848

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General specification

Parameter	Unit
Cellular system	GSM850, GSM900, GSM1800, GSM1900
RX frequency band	GSM850: 869-894 MHz EGSM: 925 ... 935 MHz GSM900: 935 ... 960 MHz GSM1800: 1805 ... 1880 MHz GSM1900: 1930 ... 1990 MHz
TX frequency band	GSM850: 824-849 MHz EGSM: 880 ... 890 MHz GSM900: 890 ... 915 MHz GSM1800: 1710 ... 1785 MHz GSM1900: 1850 ... 1910 MHz
Output power	GSM850: +5 ... +33 dBm (3.2 mW ... 2 W) EGSM: +5 ... +33 dBm (3.2 mW ... 2 W) GSM900: +5 ... +33 dBm (3.2 mW ... 2 W) GSM1800: +0 ... +30 dBm (1.0 mW ... 1 W) GSM1900: +0 ... +30 dBm (1.0 mW ... 1 W)
Duplex spacing	GSM850: 45 MHz EGSM: 45 MHz GSM900: 45 MHz GSM1800: 95 MHz GSM1900: 80 MHz
Number of RF channels	GSM850: 124 EGSM: 50 + 124 = 174 GSM900: 124 GSM1800: 374 GSM1900: 299
Channel spacing	200 kHz (each band)
Number of TX power levels	GSM850: 15 EGSM: 15 GSM900: 15 GSM1800: 16 GSM1900: 16
Sensitivity, static channel	GSM850: -102 dBm EGSM: -102 dBm GSM900: -102 dBm GSM1800: -102 dBm (+25°C) GSM1900: -102 dBm
Frequency error, static channel	< 0.1 ppm
RMS phase error	< 5.0 °
Peak phase error	< 20.0 °

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Accessories

Product Type	Description	Part Number	Comment
ACP-7U ACP-7E ACP-7X ACP-7H ACP-7C ACP-7A ACP-7AR	E&A, APAC = Standard Charger, Americas = Standard Travel Charger	0675143, 0675172 0675144, 0675171 0675145, 0675173 0675146 0675212, 0675158 0675148 0675244	
ACP-8E ACP-8U ACP-8X ACP-8J ACP-8K ACP-8A ACP-8C ACP-8UB ACP-8G ACP-8AR	E&A = Travel Charger, APAC = Fast & Light Charger	0675195 0675196, 0675269 0675197 0675198 0675199 0675214 0675211 0675236 0675237 0675248	
ACP-12E ACP-12X ACP-12U ACP-12UB ACP-12C ACP-12G ACP-12A ACP-12AR	Travel Charger	0675294 0675296 0675303 0675293 0675295 0675297 0675300 0675298	
AC-1E	Retractable Charger	0675349	RH-50 only
AXF-15S	Antenna Coupler	075018	
BHF-1	Headrest Handsfree	0694102	
BL-5C	Battery Eur/Afr & Apac Battery France Battery US Battery China Battery Brazil	0670400 0670399 0670398 0670397 0670448	English type label French type label English type label Chinese type label Portuguese type label
BR-5C	Li-Ion Battery Eur/Afr & Apac Li-Ion Battery France Li-Ion Battery US Li-Ion Battery China Li-Ion Battery Brazil	0670453 0670452 0670451 0670450 0670449	English type label French type label English type label Chinese type label Portuguese type label
CARK126	Car kit including MBC-15S & AXF-15S	0085197	
CC-9D	Active Covers Apac	0263064	A-Cover, Orange, Design A C-Cover, Orange, Design A
CC-63D	Active Covers Eur / Afr	0263015	A-Cover, Orange, Design B C-Cover, Orange, Design B

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Product Type	Description	Part Number	Comment
CC-69D	Active Covers US	0263065	A-Cover, Orange, Design F C-Cover, Orange, Design F
CC-71D	Active Covers Apac	0263066	A-Cover, Blue, Design A C-Cover, Blue, Design A
CC-72D	Active Covers Eur/Afr & US	0263067	A-Cover, Blue, Design B C-Cover, Blue, Design B
CC-174D	Active Covers Apac	xxxxxxxx	A-Cover, Orange, t.b.d. C-Cover, Painted Orange
CC-175D	Active Covers Apac	xxxxxxxx	A-Cover, Blue, t.b.d. C-Cover, Painted Blue
DCV-14	Connectivity Desk Stand	0675323	
DKU-5	Connectivity Adapter Cable	0730235	
HDB-4	Boom Headset	0694094, 0694108	
HS-1C	Camera Headset Eur/Afr & Apac Camera Headset China Camera Headset Canada Camera Headset Euro 1 Camera Headset Euro 2 Camera Headset Euro 3 Camera Headset US	0694124 0694128 0274286 0274063 0274062 0273950 0086080	English type label Chineses type label Canadian retail package US sales package
HS-2R	Radio Headset Euro 1 Radio Headset Euro 1 Radio Headset Euro 1 HS-2R Headset FM Radio Headset RP version FM Radio Headset US RP Radio Headset Pop Port	0274111 0274110 0273951 0274350 0275850 0274047 0274349	 English label Chinese type label
HS-5	Headset	0694120, 0694121 & 0694122	
HS-10	Retractable Headset Eur/Afr & Apac Retractable Headset Eur/Afr & Apac Retractable Headset China Retractable Headset US Retractable Headset China Retractable Headset Eur/Afr & Apac Retractable Headset	0274162 0274169 0274170 0275675 0694125 0694126 0694127	English type label English retail package Chinese retail package US retail package Chinese type label English type label No label
HSU-3	Privacy Handset	0650039	
LCH-9	E&A, APAC = Mobile Charger	0675120, 0675239	
LCH-12	E&A, APAC = Mobile Charger	0675328	
LPS-4	Inductive Loopset	0630443	
MBC15S	Mobile Holder	0650041	

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Product Type	Description	Part Number	Comment
PT-3	Fun Camera	0080829 0750199, 0263177 0750201, 0263178 0263203 0263204 0274253 0274254 0274255 0275774 0275775 0275786 0275776 0275777 0275778	US retail package English label Chineses label English label Violet/Grey English label Blue/Black Euro 3 Euro 2 Euro 1 Euro 1 Violet/Grey Euro 2 Violet/Grey Euro 3 Violet/Grey Euro 3 Blue/Black Euro 1 Blue/Black Euro 2 Blue/Black
HDA-9	PopPort™ to tty adapter	0694115	RH-50 only

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